TIME-PHASED FORCE AND DEPLOYMENT DATA (TPFDD)

Overview

In the simplest terms, TPFDD is the Joint Operation Planning and Execution System (JOPES) database portion of an operations plan. It is a compilation of operational and deployment information created for a particular operation plan (OPLAN) (and, in some cases, concept plan [CONPLAN]) in JOPES. The TPFDD is made available to all concerned commands (supported and supporting) that have permissions to the plan identification (PID) within the Global Command and Control System (GCCS) JOPES database.

The TPFDD

> **is a force list.**
> **identifies capabilities.**
> **is a deployment document with sequence, routing, and movement.**

The TPFDD is <u>not</u> a

> **concept of employment.**
> **tactical movement document.**

The ultimate goal of the TPFDD is to accurately reflect the deployment requirements of personnel and equipment in a sequence that supports the commander's concept of operations. It is imperative that the TPFDD be accurate and timely since inaccurate data can result in inefficient use of strategic assets, delays in movement, and increased expenditure of man-hours and resources. The United States Transportation Command (USTRANSCOM), along with its components, the Air Mobility Command (AMC) and/or Military Sealift Command (MSC) uses this information to allocate and schedule strategic transportation assets to meet deployment requirements. Transportation allocation is based on the requirements of the whole JOPES database worldwide.

The TPFDD reflects the following information:

- **Forces to be transported to the operations area**
- **Type and amount of equipment per unit**
- **Numbers of personnel per unit**
- **Preferred methods of transportation**
- **Desired dates for movement**
- **Designated ports of embarkation (POEs) and debarkation (PODs).**

TPFDD Development Process

One of the most time-consuming and intensively managed aspects of plan development is constructing the OPLAN TPFDD. The supported commander provides TPFDD development guidance and milestones to the supporting and subordinate commanders through a **TPFDD letter of instruction (LOI)**. Furthermore, TPFDD development is based on three main processes: force planning, support planning, and transportation planning. The resulting TPFDD is both a force requirements document and a prioritized transportation movement document that defines the supported combatant commander's time-phased lift requirements for personnel, equipment, and supplies. TPFDD development involves the sequential development and refinement of forces, logistics, and transportation data in a process termed **TPFDD refinement**. A TPFDD normally contains assigned, augmentation, and supporting forces with accompanying supplies. As TPFDD refinement progresses, an estimate of resupply and personnel requirements to sustain the force based on consumption factors, computer modeling, and past experience is added. Finally, the objective of **TPFDD maintenance** is to systematically and effectively incorporate required changes to the TPFDD in a standardized matter at defined intervals. By maintaining the TPFDD, it becomes a viable database that is as current as possible throughout the deployment and serves as the basis for the redeployment TPFDD.

The TPFDD process should parallel and support the force deployment planning and execution (FDP&E) process during either deliberate or crisis action planning. The planning activities described below illustrate a simplified step-by-step FDP&E and TPFDD development procedure.

Planning Activity: Receive and Analyze Mission

Actions

- Establish and monitor newsgroups in the GCCS. These newsgroups are the primary medium for communicating JOPES issues such as TPFDD validations, requests for changes to unit line numbers (ULNs), and so forth. It is important to comprehend that newsgroups are the formal medium for communication.

- Prepare the TPFDD LOI, activate the operations planning team (OPT), and conduct mission analysis. There are two types of TPFDD LOIs, Joint Chiefs of Staff (JCS) and the combatant commander/component/Marine expeditionary force (MEF). These LOIs provide guidance and list data elements to be used for each step in the FDP&E (e.g., ULN guidance, sourcing requirements, validations, movement, plan identification [PID], newsgroup ID, earliest arrival date [EAD]/latest arrival date [LAD] guidelines and milestones).

Planning Activity: Develop Concept of Operations

Actions: Develop a preliminary concept of operations, restatement of mission, and hard copy tasking and execute mission.

Planning Activity: Determine Requirements

Actions: Perform initial force and sustainment sizing, conduct a transportation capability study, and activate the joint task force (JTF) and crisis action teams.

Planning Activity: Phase Deployment Flow

Actions: Provide the commander's estimate and courses of action (COAs), issue warning orders, report to the JTF commanders for planning, develop and refine requirements and the TPFDD, and draft the OPLAN.

Planning Activity: Source Requirements

Actions: Source forces, forward unsourced requirements, conduct the risk assessment, and distribute deployment and execute orders.

Planning Activity: Tailor Requirements

Actions: Refine and forward lift requirements and alter or reprioritize phasing.

Planning Activity: Validate Movement Requirements

Actions: Verify and consolidate requirements, verify TPFDD information, and validate transportation requirements.

Planning Activity: Allocate Units to the Lift and Load Plan

Actions: Schedule lift and publish movement schedules, conduct load planning, reconcile discrepancies, and conduct origin theater activities.

Planning Activity: Marshall and Move to the POE

Actions: Marshall forces for movement, move to the POE, and monitor movement.

Planning Activity: Manifest and Move to the POD

Actions: Manifest and reconcile discrepancies, move to the POD and monitor movement, and report departures and arrivals.

Planning Activity: Receive and Move to the Final Destination

Actions: Conduct reception, staging, onward movement, and integration (RSO&I).

Reports

TPFDD reports (printouts) can be either standard or ad hoc; standard reports usually are sufficient. The ULNs in standard reports can be sorted in various ways (e.g., by dates or locations). The three standard reports are as follows:

F11D. This report identifies the origin, POD, and destination; the EAD and LAD; passengers (PAX); and short tons (STONs) of each ULN. The F11D report is the easiest (and shortest) report to read and is <u>the most commonly used</u>.

F11E. This report identifies complete movement detail, including all locations, dates, and mode and source (M/S) codes for each leg of the deployment. The cargo is displayed as either STONs or square feet broken down by bulk, oversize, or outsize. This report is useful when checking for deployment timeline and location errors and when determining airlift requirements.

F11W. The most detailed and lengthy report, the F11W is essential for verifying the accuracy of cargo detail. This report lists each item's weight and dimensions and summarizes data by cargo category code (CCC) and ULN. This report is checked closely by the G-4 strategic mobility officer (SMO) and the G-3 JOPES support cell prior to validation.

Reading a TPFDD F11D Report

F11W

ULN	WHOSE STUFF	PAX	ORIGIN	POE	POD
UIC					

- ULN--	---FORCE DESCRIPTION---	PRO	SVC	-UTC-	ULC	FIC	PIC	ORGN	RLD	M	S	POE	ALD	M	S	POD	EDD	EAD	FAD	LAD	CRD
--UIC--	-----UNIT NAME-----		APERS		NRPAX			PRI/AO	M	S	DEST	RDD	M	S	INT	DLY	LT				
CCC																					
CARGO-DESCR-			HEAVY LIFT																POL (MBBL)		
	PCS	LNTH	WDT	HGT	SQFEET	BULK(ST)	BULK(MT)	OVER(ST)	OVER(MT)	OUT(ST)	OUT(MT)	NAT(ST)	NAT(MT)								

W2DD3AF	LFSP DET, ENGR BN		5	M	4WBGA DET	9	ETZB	C999	L	G	GUPL	C999	A	K	KTPL		C999	C999
M21300	1ST FSSG		74			74	006Z	L	D	APGN	C999							
J3C 463L QUADCON		3	88	108	96	66	2	12.1										
J3C TOTALS					198	6	37											
R2D																		
A1957 MRC-145	1	185	85	83	110			2.6	18.9									
B2566 FORKLIFT	1	196	78	79	107			5.5	17.5									
R2D TOTALS					217			8.1	37									

QTY & DIMENSIONS

TOTAL WEIGHT

MODE
SOURCE

CAT
CODE

LVL 5 / 6 DETAIL FROM MDSS II

WHEN THE
STUFF NEEDS
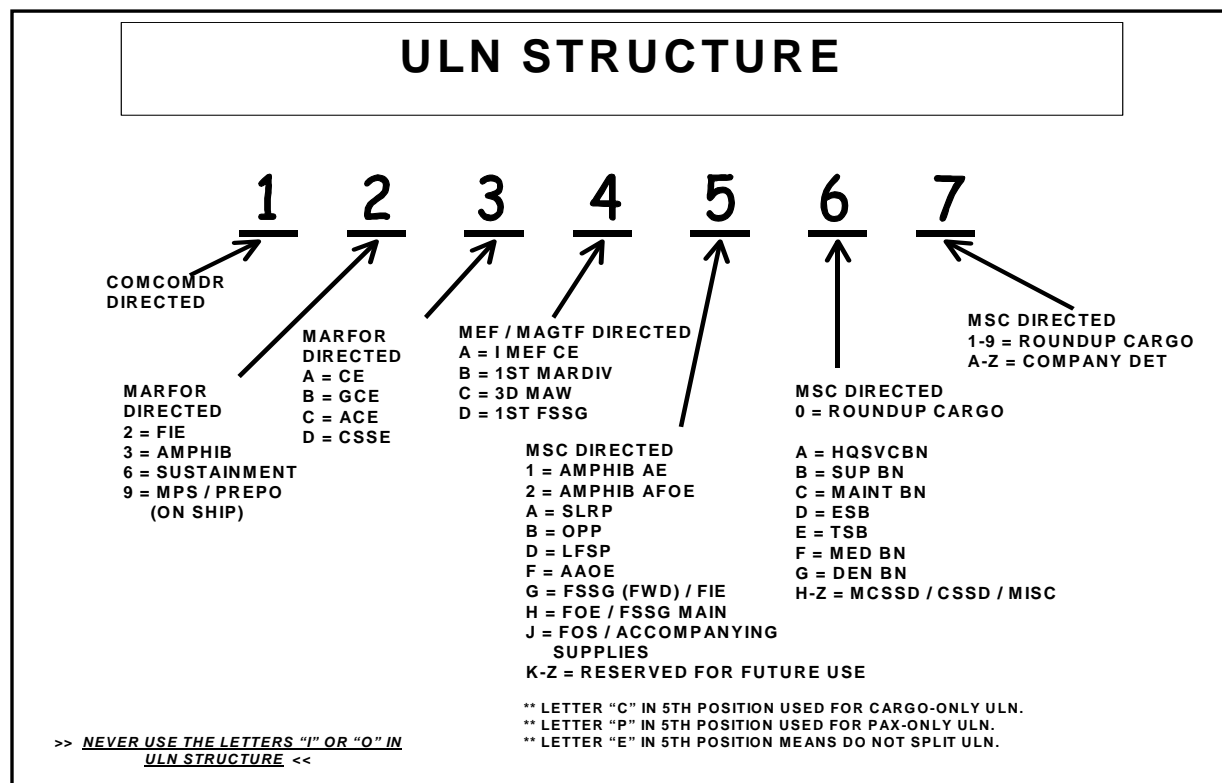TO ARRIVE

Reading a TPFDD F11W Report

Basic Definitions

The TPFDD is the primary output of joint force requirements generator (JFRG) II, which is sent to JOPES through GCCS. A TPFDD is identified by a **plan identification (PID)**. The PID is the name of the collection of records that comprise a single TPFDD. The PID is represented by a five-character code. The combatant commanders determine the PIDs for their respective JOPES TPFDDs. Sometimes, combatant commanders establish a PID that holds records for multiple small TPFDDs. In these cases, **force modules (FM)** are used to identify records of a single TPFDD.

A **force module** is a means of querying the TPFDD in order to select records that are grouped electronically to permit their manipulation as a single entity. The query results can be named, stored, and later retrieved for further manipulation. For example, the user can place all ULNs with the same deployment mode (e.g., aviation logistics support ship, [T-AVB]) in an FM and change the deployment date or POD of the same ULNs with a few keystrokes. Combatant commanders may direct force providers to establish specific FMs in the planning guidance for an OPLAN, operation, or exercise.

The following describes selected key fields of the TPFDD:

Unit Line Number. According to Joint Pub 1-02, a ULN is a seven-digit, alphanumeric field that uniquely describes a unit entry (line) in a JOPES TPFDD. The first five characters are the force requirement number (FRN), and the sixth and seventh numbers are the fragmentation code (FRAG) and insert positions. A ULN is analogous to a landing serial used during an amphibious assault. It identifies a force requirement, supplies, and/or equipment. It identifies movement from the same point of origin, to the same destination, at the same time, and via the same transportation mode and source.

ULN STRUCTURE

1   2   3   4   5   6   7

COMCOMDR DIRECTED (position 1)

MARFOR DIRECTED (position 1)
2 = FIE
3 = AMPHIB
6 = SUSTAINMENT
9 = MPS / PREPO
   (ON SHIP)

MARFOR DIRECTED (position 2)
A = CE
B = GCE
C = ACE
D = CSSE

MEF / MAGTF DIRECTED (position 3)
A = I MEF CE
B = 1ST MARDIV
C = 3D MAW
D = 1ST FSSG

MSC DIRECTED (position 5)
1 = AMPHIB AE
2 = AMPHIB AFOE
A = SLRP
B = OPP
D = LFSP
F = AAOE
G = FSSG (FWD) / FIE
H = FOE / FSSG MAIN
J = FOS / ACCOMPANYING
   SUPPLIES
K-Z = RESERVED FOR FUTURE USE

** LETTER "C" IN 5TH POSITION USED FOR CARGO-ONLY ULN.
** LETTER "P" IN 5TH POSITION USED FOR PAX-ONLY ULN.
** LETTER "E" IN 5TH POSITION MEANS DO NOT SPLIT ULN.

MSC DIRECTED (position 6)
0 = ROUNDUP CARGO
A = HQSVCBN
B = SUP BN
C = MAINT BN
D = ESB
E = TSB
F = MED BN
G = DEN BN
H-Z = MCSSD / CSSD / MISC

MSC DIRECTED (position 7)
1-9 = ROUNDUP CARGO
A-Z = COMPANY DET

>> _NEVER USE THE LETTERS "I" OR "O" IN ULN STRUCTURE_ <<

Fragmentation and insert codes are used when a single unit is split during the deployment. Splits occur when portions of the unit do not move from the origin to the destination together for all legs of the deployment, move along different routes, begin and end the deployment at different locations, or move at different times. When splitting a ULN using FRAG and insert procedures, both the sixth and seventh ULN positions must be filled. Any character or number is valid except the letters "I" and "O," which can be easily confused with the numbers "1" and "0."

Parent ULNs are administrative ULNs without any data that are sometimes used to establish hierarchical relationships.

The force **providing organization code (PROVORG)** is the data field that identifies the combatant commander, service, or DoD agency that is providing the forces to be deployed.

A **unit type code (UTC)** is a five-character code that identifies standard types of forces and is used to relate notional force requirements. When a UTC is inserted into a TPFDD, it automatically pulls in data that describes the standard unit from a built-in file called the **type unit characteristics (TUCHA) file. All valid UTCs are in the TUCHA file**. For example, if a UTC for a generic fixed-wing Marine aircraft group (MAG) were inserted, the complete table of organization (T/O) and table of equipment (T/E) of the MAG, including equipment dimensions and weights, would be displayed in the passenger (PAX) and cargo detail. Such TUCHA generated forces are described as standard. When the TUCHA detail is subsequently tailored or the actual unit deploying is properly sourced, the data is then described as nonstandard.

The **force description** contains a free-form description of the identified force requirement. When a standard UTC is entered, the system automatically pulls up an associated description from the TUCHA. When sourcing a TPFDD, the MEF may use the field to accurately describe the provided force.

A **unit identification code (UIC)** is a six-character code that identifies the unit filling the force requirement.

The **unit name** is the actual name of the unit filling the force requirement. The unit name is automatically loaded with the UIC.

The **force indicator code** (FIC) is system generated and identifies how the ULN was generated. A FIC of 0 indicates the force is exactly that contained in the TUCHA. Since units do not deploy as represented by their T/O and T/E, such data is unacceptable in a TPFDD submitted to support a deployment. Units should submit data with a FIC of 8 or 9, reflecting properly sourced data.

The **personnel requiring non-organic transportation (PAX)** field indicates the number of personnel requiring transportation. It should reflect the actual number deploying as part of the force identified in a ULN.

Mode and source codes are single-character codes that indicate the desired means of transportation for all legs of a deployment. The following are the most common codes, as listed in the Joint TPFDD LOI:

Mode and Source Codes

Mode	Source	Explanation
A	C	Air via supporting commander channel aircraft
A	D	Air via theater (supported commander) aircraft
A	H	Air via organic aircraft
A	K	Air via strategic (AMC, AMC contracted) aircraft
A	M	Air via unit (service) aircraft or unit-funded commercial tickets
L	D	Land via theater (supported commander) truck
L	G	Land via MTMC arranged truck or rail (CONUS)
L	H	Land via organic vehicles
L	M	Service provided non-organic land transport
S	C	Sea via U.S. Navy ship (e. g. amphibious)
S	D	Sea via U.S. Navy ship (MPS/AWR)
S	E	Sea via MSC ship (common user strategic sealift)
S	W	Sea via MSC (assault follow-on echelon [AFOE])
X	G	No transportation required (origin and POE or POD and destination the same, CONUS POEs/PODs)
X	X	No transportation required (origin and POE or POD and destination the same, non-CONUS POEs/PODs)

Geolocation code (GEOLOC). When specifying unit origins, POEs, PODs and destinations in the TPFDD, planners use a four-character code called a GEOLOC. JFRG II and the requirements, development, and analysis (RDA) contain all potential GEOLOCs in a table. Some TPFDD reports display the GEOLOC while others display the complete geographic name. Planners must ensure that the correct code is selected to match the M/S code requirement. For example, Morehead City, North Carolina, has five codes listed, two for the city and one for a fuel farm. If we identify a requirement for sealift, USTRANSCOM will act on the single code for the report.

Date. TPFDDs contain date values that reflect a unit's deployment sequence. The values are based on the day the deployment for the operation officially begins (**C-day**). The **C-day** is entered in the TPFDD as C000. C plus 5 days (C+5) is entered as C005.

Movement Dates

- **Ready to Load Date (RLD).** The date a unit will be ready to move from the POO to the POE.

- **Available to Load Date (ALD).** The date the unit will be ready to begin loading at the POE. The date the unit will be available at POE to embark on strategic lift.

- **Earliest Arrival Date (EAD).** A date, relative to C-day, specified by a planner as the earliest date a unit, a resupply shipment, or replacement personnel can be accepted at the POD during a deployment. Used with the LAD, the EAD defines a delivery window for transportation planning.

- **Latest Arrival Date (LAD).** A date, relative to C-day, specified by a planner as the latest date when a unit, a resupply shipment, or replacement personnel can arrive at the POD and support the concept of operations. Used with the EAD, the LAD defines a delivery window for transportation planning. The unit should complete unloading at POD by the LAD.

- **Required Delivery Date (RDD).** A date, relative to C-day, when a unit must arrive at its destination to properly support the commander's concept of operations.

Cargo detail in a TPFDD has multiple levels of detail." There are five levels defined for JOPES TPFDDs. The level of detail determines how well the data describes the cargo. For example, if a TPFDD had only one level of detail, the cargo data would include only the total weight and square feet measurements. Specific items would not be listed nor would the data indicate if the cargo were bulk, oversized, or outsize. Such data is not very useful when determining lift requirements.

MEF units provide TPFDDs with **level-four detail**, "detail expressed as number of passengers and individual dimensional data (expressed in length, width, and height in number of inches) of cargo by equipment type by ULN." Level-four detail requires weights in terms of STONs and measurement tons (MTONs). Essentially, the data should reflect the following:

- Cargo detail reflects principal end items (PEIs), ammunition, hazardous materials, and assets that indicate unit capabilities or generate sustainment. Cargo descriptions should be written as listed in the look-up file in MAGTF Deployment System (MDSS) II/JFRG II (TAMCN followed by the item name (for T/E items), the national item identification number (NIIN) followed by the item name (for individual material requirements list [IMRL]/aviation consolidated allowance list [AVCAL]/coordinated shipboard allowance [COSAL] items), mobile facility (MF) configuration code followed by the MF description. The cargo description for pallets and containers should identify the contents when possible (e.g., 463L pal tents; C4433 quadcon, bulk). Ensure that the weights and dimensions of vehicles, trailers, MFs, containers, and 463L pallets reflect the items stored on or in them.

- Do not identify baggage pallets in the TPFDD. The USTRANSCOM uses standard planning factors to calculate the quantity of baggage pallets.

Cargo detail is expressed using six levels:

   Level I. Aggregated: total number of PAX, STONs, and/or MTONS. One MTON equals 40 cubic feet.

   Level II. Summary: total number of PAX and STONS/MTONS expressed as bulk, oversized, outsized, and non-air transportable (NAT).

   Level III. Detail: STONS, MTONS, and square feet by cargo category.

   Level IV. Type Cargo: quantity by type of equipment, square feet, dimensions, STONs, MTONs, and line item number.

   Level V. Sustainment: detail on quantity and type of cargo that allows computation of sustainment (e.g., radios, weapons).

   Level VI. Unit deployment list in MDSS II lists items by serial number or individual package.

Cargo category codes help describe cargo by type, whether a container, rolling stock, ammunition, or hazardous material (HAZMAT). Lift providers need accurate CCCs to

determine the type of carrier required and special handling equipment. Some examples and basic rules for assigning CCCs are listed below:

- Use a first character of "L" for vehicles designed for storing HAZMAT (e.g., certain fire-fighting trucks and aviation support equipment), but only when the HAZMAT is being transported on the vehicle.

- Use a first character of "M" for ammunition and aviation ordnance.

- Use a first character of "G" for fuel cells and bladders when they contain petroleum, oils, and lubricants (POL).

- For normal equipment, use a second character of "1," "2," or "3," as appropriate, to reflect outsized, oversized, or bulk cargo.

- Use a third character of "D" for all vehicles, containers, 463L pallets, and trailers that are not mobile loaded or containerized on or in other assets for movement.

- A third character of "A" identifies equipment loaded in or on vehicles, containers, and 463L pallets. When a TPFDD is sourced using MDSS II, the system automatically assigns a third character of "A" for all associated items, except those items with an association of "hitched to."

- Cargo size falls into one of four classifications: **bulk, oversized, outsized, and non-air transportable**. As a rule, only outsized, oversized, square-loaded cargo or major end items are reflected in detail in the ULN. All other cargo is associated with bulk cargo and reflected by the manner in which it has been configured for movement (e.g., 463L pallet, standard warehouse pallet, mobile loaded).

Selected Cargo Category Codes

First Character	Second Character	Third Character
A – Vehicles non-self deployable	**0 – Non-air trans unit equip**	**A – Loaded on organic vehicles**
B – Non-self deploying aircraft	**1 – Outsized unit equip**	**B – Containerized 20 ft containers 20 STONs or less**
G – Bulk POL	**4 – Non-air transportable accompanying supplies**	
M – Ammunition	**7 – Bulk accompanying supplies**	
R – Vehicles self-deploying		

The easiest way to ensure cargo is properly identified is to source the TPFDD correctly using MDSS II.

Movement details include fields required for the movement planning, location fields indicating all waypoints en route to the theater, data fields associated with the locations, and M/S fields for each leg of the movement.

Location fields. The specific GEOLOCs are described below.

Location Terms

Point of Origin (POO). The beginning point of a deployment. The point or station at which a movement requirement is located. For hypothetical requirements, the origin will be the most likely station at which the requirement will originate.

Point of Embarkation (POE). The geographic point in a routing scheme from which cargo or personnel depart. This point may or may not coincide with the origin.

Port of Debarkation (POD). The geographic point at which cargo or personnel are discharged. This point may be a seaport or aerial port of debarkation. For unit requirements, it may or may not coincide with the destination.

Interim Stop. An intermediate stopping point in the routing of a deploying unit, used to lay over the force for a specified time, normally longer than one day. It is often used to unite the personnel and cargo of split shipments. This point may occur between the origin and POE, the POE and POD, or the POD and destination (DEST).

POO to POE Leg. Movement from a unit's POO to a POE.

POE to POD Leg. Movement from the POE to a POD (also known as the strategic leg).

POD to DEST Leg. Movement from the POD to the DEST.

Destination. The terminal geographic location in the routing scheme for forces only. The destination identifies the station or location in the objective area at which the unit will be employed. Destination may be the same as the POD.

Date fields are the key to describing the flow, closure, and movement of forces. C-day is the key planning date that begins to define the timeline flow of forces and sustainment.

Example Deployment Sequence

1. The MAGTF/MEF/joint force (JF) commander task organizes and creates a force list based on the concept of operations. This force list is broken out by MSC and distributed via JFRG II in ULN sequence.

2. JFRG II requirements are screened by the MSC. The requirements may be modified based on the concept of operations, the concept of logistics support, and the MSC capability requirements.

3. JFRG II requirements are forwarded to the unit level (S-3) for sourcing.

4. Units source requirements from MDSS II master UDL in level V and VI detail.

5. Units forward sourced JFRG II data to the MSC.

6. MSCs consolidate unit MAGTFs, input all required movement data into MAGTF II per TPFDD guidance/LOI, and correct any fatal errors. All corrections or changes made at the MSC level must be coordinated with the unit(s).

7. MSCs submit consolidated MAGTF data to the MEF. The MEF consolidates all input from its MSCs and submits the component for upload into RDA.

8. Once the MAGTF data is loaded into RDA, each MSC and the MEF check for and correct logical and fatal errors.

9. Once errors are fixed, the component runs JFAST and RDA error reports. The MEF and the MSCs correct errors and movement data if necessary.

10. The commanders continue to tailor requirements based on higher headquarters (HHQ) guidance and METT-T. Is this capability required?

11. Validate, validate, and validate. The commanders should ask the following questions:

   - Is the unit capable of performing the mission?
   - Is the unit dual-tasked or overtasked?
   - Is the unit identification code (UIC) Status of Resources and Training System (SORTS) reportable?
   - Do the PAX reflect the actual unit/detachment?

> **When a command validates its ULNs, it certifies to the USTRANSCOM and all echelons of its operational chain of command that the data has been reviewed one final time, is free of all errors, and supports the commander's concept of operations. This is considered the unit's last opportunity to make changes to PAX and/or cargo detail based on situation updates becoming available on the contingency being supported. Unit readiness and movement dates must also be confirmed.**

12. The commanders execute the following:

- Allocate the lift and load plan.
- Marshall and move to the POE.
- Manifest and move to the POD.
- Conduct reception and move to the final destination.

> **Following validation, ULNs are scheduled to USTRANSCOM carriers. Once lift is allocated, the MAGTF commander must ensure that the deploying units' planned PAX and cargo requirements are manifested accurately for each mission via load plans in JOPES.**